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(54) Title: **CELL PENETRATING PEPTIDES**

(57) **Abstract:** The present invention relates to a method for predicting or designing, detecting, and/or verifying a novel cell-penetrating peptide (CPP) and to a method for using said new CPP and/or a novel usage of a known CPP for an improved cellular uptake of a cellular effector, coupled to said CPP. Furthermore, the present invention also relates to a method for predicting or designing, detecting and/or verifying a novel cell-penetrating peptide (CPP) that mimics cellular effector activity and/or inhibits cellular effector activity. The present invention additionally relates to the use of said CPP for treating and/or preventing a medical condition and to the use of said CPP for the manufacture of a pharmaceutical composition for treating a medical condition.